

1/11

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1 GCCACCGACA TCCGCCGCAA TGCTGTGTCT CACCTCCTCT TCCTCCTCCG CGCCCGCTCC
61 GCTCCTTCCC TCTCTCGCTG ATCGACCGAG CCCGGGAATC GCGGGCGGGG GTGGCAATGT
121 TCGCCTGAGC GTGGTTTCTT CGCCGCGCCG GTCGTGGCCT GGAAAGGTCA AGACCAATTT
181 CTCAGTTCCT GCGACTGCGC GAAAAACAA AACCATGGTG ACTGTTGTGG AGGAGGTCGA
241 CCACCTTCCT ATATATGATC TGGACCCTAA GTTGGAGGAA TTCAAGGATC ACTTCAACTA
301 TAGGATAAAA AGATACCTCG ACCAGAAATG CCTGATTGAA AAACATGAGG GGGGCCTTGA
361 AGAATTTTCT AAAGGCTATT TGAAGTTTGG GATTAATACA GTTGATGGTG CCACAATATA
421 TCGTGAATGG GCGCCTGCTG CACAAGAAGC ACAGCTCATT GGTGAGTTCA ATAAGTGGAA
481 TGGTGCAAAA CACAAGATGG AGAAGGATAA ATTTGGCATT TGGTCAATCA AGATTTTACA
541 TGTCAATGGG AAGCCTGCCA TCCCTCACAA TTCCAAGGTT AAATTTTCGT TTAGGCATGG
601 GGGTGGAGCA TGGGTTGATC GTATTCCCGC ATGGATTCTG TATGCAACTT TTGATGCCTC
661 TAAATTTGGA GCTCCATATG ATGGTGTACA CTGGGATCCT CCAGCCTGTG AAAGGTACGT
721 GTTTAAGCAT CCTCGACCTC CAAAACCTGA TGCTCCACGC ATCTATGAGG CTCATGTGGG
781 GATGAGTGGT GAAGAGCCAG AAGTAAGCAC ATACAGAGAA TTTGCAGACA ATGTGTTACC
841 ACGCATACGG GCAAATAACT ACAACACAGT TCAGTTAATG GCAATCATGG AACATTCCTA
901 CTATGCTTCT TTTGGGTATC ACGTGACAAA TTTTTCGCA GTCAGCAGCA GATCAGGAAC
961 ACCAGAGGAT CTGAAATATC TTGTTGACAA GGCACATAGT TTAGGATTAC GAGTTCTGAT
1021 GGATGTTGTC CATAGCCATG CGAGTAATAA TGTGACCGAT GGTCTAAATG GCTATGACGT
1081 TGGACAAAAC ACTCATGAGT CTTATTTTCA TACAGGAGAT AGGGGCTACC ATAAACTCTG
1141 GGATAGTCGT CTGTTCAACT ATGCCAATTG GGAGGTCTTA AGATTTCTTC TTTCTAATTT
1201 GAGATATTGG ATGGACGAAT TCATGTTTGA TGGCTTCCGA TTTGATGGGG TTACATCAAT
1261 GCTATACCAT CACCATGGTA TCAATAAGGG ATTTACTGGA AACTACAAGG AGTATTTTCA
1321 TTTGGATACC GATGTGGATG CAATTGTTTA CATGATGCTC GCAAACCATT TAATGCATAA
1381 ACTCTTGCCG GAAGCAACTA TTGTTGCTGA AGATGTTTCG GGCATGCCAG TGCTTTGTCTG
1441 GCCAGTTGAT GAAGGTGGAG TAGGGTTTGA CTTCCGCCTG GCAATGGCCA TTCCTGATAG
1501 ATGGATTGAC TACCTGAAGA ACAAAGAGGA CCGCAAATGG TCAATGAGTG AAATAGTGCA
1561 AACTTTGACT AACAGGAGAT ATACAGAAAA ATGCATTGCC TATGCCGAGA GCCATGATCA
1621 GTCCATTGTT GGTGACAAGA CTATAGCATT TCTCTTGATG GACAAGGAAA TGTACACTGG
1681 CATGTCAGAC TTGCAGCCTG CTTACCTAC CATCAACCGT GGCATTGCAC TCCAAAAGAT
1741 GATTCACTTC ATTACGATGG CCCTTGAGAG TGATGGCTAC TTAAATTTTA TGGGCAATGA
1801 GTTTGGCCAT CCAGAAATGGA TTGACTTTCC AAGAGAAGGC AACAACCTGA GCTATGATAA
1861 ATGCAGACGT CAGTGGAGCC TTGTCGACAC TGATCACCTT CGATACAAGT ATATGAATGC
1921 ATTTGATCAA GCAATGAATG CACTCGAGGA GGAATTTTCC TTCCTGTCAT CATCAAAGCA
1981 GATTGTTAGC GACATGAACG AGAAAGATAA GGTATTTGTC TTTGAACGTG GAGATTTGGT
2041 TTTTGTTTTT AATTTTCATC CCAACAAAAC TTACAAGGGT TACAAAGTCG GATGTGACTT
2101 GCCCGGGAAG TACAGAGTAG CTCTGGACTC TGATGCTTTG GTCTTTGGTG GCCATGGAAG
2161 AGTTGGCCAT GATGTGGATC ACTTCACGTC TCCCGAGGGA ATGCCAGGAG TACCAGAAAC
2221 AAATTTCAAC AACCGCCCTA ACTCATTCAA AGTCCTTTCC CCGCCCCGTA CCTGTGTGGC
2281 TTACTATCGC GTTGATGAAG ATCGTGAAGA GCTCAGGAGG GGTGGAGCAG TTGCTTCTGG
2341 AAAGATTGTT ACAGAGTATA TCGATGTTGA AGCAACAAGT GGGGAGACTA TCTCTGGTGG
2401 CTGGAAGGGC TCCGAGAAGG ACGATTGTGG CAAGAAAGGG ATGAAGTTTG TGTTTCGGTC
2461 TTCTGACGAA GACTGCAAAT GAAGCATCAG ATTTCTTGAT CAGGAGCAAC TGTTGGTGCC
2521 CTTGTAATCT GGAGATCCTG GCTTGCCTTG GACTTGGTTG TGGTTCTTTA GCAGTTGCTA
2581 TGTACCTATC TATGATATGA ACTTTATGTA TAGTTCGCCT TAAAGAAAGA ATAAGCAGTG
2641 ATGATGTGGC CTTAAACCTG AGCTGCACAA GCCTAATGTA AAAATAAAGT TTCAGGCTTT
2701 CATCCAGAAAT AAAACAGCTG TTCATTTACC ATCTCAAAA
```

Figure 1

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1  CTTGACTCCC CCCACTCCTC CCTCGTGCTG CTCCTCCTCG TCGCTCGGCT CGAGGCGCGG
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121 ACCGGGGGAT GCGGTCGTTC GCGGTGTCCG GCGCGAGGCT CGGGGTCTGT CGGGCGGGGG
181 GCGGCGGCGG CGGCGGGGGT GGCCCGGCGG CGCGATCCGG CGGGGTGGAC TTGCCGTCGG
241 TGCTCTTCAG GAGGAAGGAC TCCTTCTCAC GTGGCGTTGT GAGCTGCGCG GGTGCTCCTG
301 GGAAGGTGCT GGTGCCTGGC GGTGGGAGCG ACGACTTGCT GTCCTCTGCG GAACCAGACG
361 TGGAAACTCA AGAGCAACCT GAAGAATCTC AGATACCTGA TGATAATAAA GTAAAACCTT
421 TTGAGGAGGA GGAAGAGATT CCAGCAGTGG CAGAAGCAAG CATAAAGGTT GTGGCTGAAG
481 ACAAACTTGA ATCTTCAGAA GTGATTCAGG ACATTGAGGA AAATGTGACT GAGGGTGTGA
541 TCAAAGATGC TGATGAACCA ACTGTGGAGG ATAAACCACG AGTTATCCCA CCACCAGGAG
601 ATGGGCAGAA GATATACCAA ATTGACCCAA TGCTGGAAGG ATTTGGAAC CATCTTGACT
661 ACCGATACAG TGAATACAAG AGAATGCGTG CAGCTATTGA CCAACATGAA GGTGGCTTGG
721 ATGCATTTTC TCGTGGTTAC GAAAAGCTTG GATTCACCCG CAGCGCTGAA GGCATTACCT
781 ACCGAGAATG GGCACCTGGA GCACAGTCTG CAGCATTAGT AGGTGACTTC AACAAATTGA
841 ACCCAAATGC AGATACTATG ACCAGAAATG AGTATGGTGT TTGGGAGATT TCCCTGCCTA
901 ACAATGCTGA TGGATCCCCT GCTATTCCTC ATGGCTCACG TGTAAGATT CGGATGGATA
961 CACCATCTGG CGTAAAGGAT TCAATTCCTG CCTGGATTAA GTTTGCTGTG CAGGCTCCAG
1021 GTGAAATACC GTACAACGGT ATATATTATG ATCCACCTGA AGAAGAAAAA TATGTATTCC
1081 AACATCCTCA ACCTAAACGA CCAATTCGC TGCGGATATA TGAATCACAT ATTGGAATGA
1141 GTAGCCCGGA ACCGAAGATA AACACATATG CTAATTTTAG GGATGAGGTG CTACCAAGAA
1201 TTAAAAAGCT TGGGTACAAT GCTGTACAGA TAATGGCAAT CCAGGAGCAC TCTTATTACG
1261 CAAGCTTTGG GTATCATGTT ACTAACTTCT TTGCGCCAAG TAGCCGTTTC GGAACCCAG
1321 AAGACTTGAA ATCTCTGATT GATAAAGCTC ACGAGCTTGG TTTGCTTGTA CTTATGGATA
1381 TTGTTACAG TCATGCATCA AACAATACCC TGGATGGTTT GAATGGTTTT GATGGTACTG
1441 ATACACATTA CTTCCATGGT GGACCACGGG GTCATCACTG GATGTGGGAT TCTCGCCTGT
1501 TCAACTATGG GAGTTGGGAA GTTTTAAGAT ATTTACTGTC GAATGCAAGG TGGTGGCTTG
1561 AAGAATACAA GTTTGATGGG TTTCGATTTG ATGGGGTGAC CTCCATGATG TATACTCATC
1621 ATGGTTTACA GGTGGCATT TACTGGCACT ATGGCGAATA TTTTGGATTT GCTACTGATG
1681 TTGATGCAGT AGTTTACTTG ATGCTGGTGA ACGATCTAAT TCATGGGCTT TATCCTGAGG
1741 CTGTAGCCAT TGGTGAAGAT GTCAGCGGGA TGCCACATT TTGTATTCTT GTTCAAGATG
1801 GTGGTGTTGG TTTTGACTAT CGTTTGATA TGGCTGTACC GGACAAATGG ATCGAACTCC
1861 TCAAGCAAAG TGACGAATAT TGGAAAATGG GTGATATCGT GCACACCCTA ACGAATAGAA
1921 GGTGGTCAGA GAAGTGTGTT ACTTATGCAG AAAGTCATGA CCAAGCACTA GTTGGTGACA
1981 AGACTATTGC ATTCTGGTTG ATGGATAAGG ATATGTATGA TTTTATGGCT CTAGACAGAC
2041 CTTCAACACC TCGCATTGAT CGTGGGATAG CATTACATAA AATGATTAGG CTTGTCACCA
2101 TGGGCTTAGG AGGCGAAGGC TATCTTAATT TCATGGGAAA TGAGTTTGGG CATCCTGAAT
2161 GGATAGATTT CCCAAGAGGC CCGCAAAGTC TTCCAAATGG CTCGGTCCTC CCAGGAAACA
2221 ACTACAGTTT TGATAAATGC CGTCGTAGAT TTGACCTTGG AGATGCAGAT TATCTTAGAT
2281 ATCATGGTAT GCAAGAGTTT GATCAGGCCA TGCAGCATCT TGAGGAAAAA TATGGATTCA
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2461 GCGTCGGTTG TTTAAAGCCT GGAAAGTACA AGATTGTGTT GGACTCAGAC GATGGCCTCT
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2581 ACAACAGACC ATGTTCAATC TCGGTGTACA CCCAAGCAG AACCGCCGTC GTGTATGCAC
2641 TTACAGAGGA CTAATGATCA GCTCTGATCA TTGGGGGAAC AACTCAAGGG AGTTGGTGGT
2701 AATGACGCCG GAATACAAC CAAGTGAAAG GTGAAAAGAA AGGCTGCCCT GACGATGTGA
2761 TTTGAGGGGC TTGTGTTTCA TCGCCAATGC CAGGAAGATG AGGTAGAAAA GCCTACTGAT
2821 GAGCTCCTGT TTTGAGTGA CTCGTGAAGG AAATAGACCA GGGTGAACGG CTTTTTTCAG
2881 AGCTATACCA AACCCATCCT ATGTTGCGCA TTCGCTGTAG TTTTGTACAT AACGATATCG
2941 GTTGGCATT TGTATGTTAT GAATAATCTG TTCGACAGAA ATGTTTTTCT CCTTGTATTT
3001 AGTGCTCAA AAAAA

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Figure 2

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1  CGGCGCACAC  CCACACACCG  ACCACCAGGC  AGCGCCTCCT  CGCTTTGGCT  CTCGCGTGAG
61  GAGGGTTTAG  GTGGAAGCAG  AGCGCGGGGG  TTGCCGGGGG  ATCCGATCCG  GCTGCGGTGC
121  GGGCGAGATG  GCGGCGCCGG  CGTCTGCGGT  TCCCGGGAGC  GCGGCGGGGC  TACGGGCGGG
181  GGCCGTGCGG  TTCCCCGTGC  CAGCCGGGGC  CCGGAGCTGG  CGTGCGGCGG  CGGAGCTCCC
241  GACGTCGCGG  TCGCTGCTCT  CCGGCCGGAG  ATTCCCCGGT  GCCGTTTCGG  TGGGGGGTTC
301  CGGGGGGCGC  GTGGCCGTGC  GCGCGGCGGG  CGCGTCAGGG  GAGGTGATGA  TCCCCGAGGG
361  CGAGAGCGAC  GGGATGCCGG  TTTCAGCAGG  TTCAGACGAT  CTGCAGTTGC  CAGCCTTAGA
421  TGATGAATTA  AGCACGGAGG  TTGGAGCTGA  AGTTGAGATT  GAGTCATCTG  GAGCAAGTGA
481  CGTTGAAGGC  GTGAAGAGAG  TGGTTGAAGA  ATTAGCTGCT  GAGCAGAAAC  CACGAGTTGT
541  CCCACCAACA  GGAGATGGGC  AAAAAATATT  CCAGATGGAC  TCTATGCTTA  ATGGCTATAA
601  GTACCATCTT  GAATATCGAT  ATAGCCTATA  TAGGAGACTG  CGTTCAGACA  TTGATCAGTA
661  TGAAGGAGGA  CTGGAAACAT  TTTCTCGCGG  TTATGAGAAG  TTTGGATTTA  ATCACAGTGC
721  TGAAGGTGTC  ACTTATCGAG  AATGGGCTCC  CGGGGCACAT  TCTGCAGCAT  TAGTAGGTGA
781  CTTCAACAAT  TGGAATCCAA  ATGCAGACCG  CATGAGCAAA  AATGAGTTTG  GTGTTTGGGA
841  GATTTTCTG  CCTAACAATG  CTGATGGCTC  ATCTCCTATT  CCACATGGCT  CACGTGTAAA
901  GGTGCGAATG  GAAACTCCAT  CTGGTATAAA  GGATTCTATT  CCTGCCTGGA  TCAAGTACTC
961  TGTGCAGGCC  GCAGGAGAAA  TCCCATACAA  TGGAAATATAT  TATGATCCTC  CTGAAGAGGA
1021  GAAGTACATA  TTCAAGCATC  CTCAACCTAA  AAGACCAAAG  TCATTGCGGA  TATACGAAAC
1081  TCATGTTGGA  ATGAGTAGCA  CGGAGCCAAA  GATCAACACG  TATGCAAAC  TTAGGGATGA
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1201  GCATGCATAT  TATGGAAGCT  TTGGGTACCA  TGTACCAAT  TTCTTTGCAC  CAAGTAGTCG
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1321  TGTGCTCATG  GATGTTGTTT  ACAGCCATGC  GTCAAATAAT  ACCCTAGATG  GGTGAACGG
1381  TTTTGATGGT  ACAGATACGC  ATTACTTTCA  TAGTGGTTCA  CGCGGCCATC  ATTGGATGTG
1441  GGATTCTCGC  CTTTTCAACT  ATGGGAATTG  GGAAGTTCTA  AGATTTCTAC  TATCCAATGC
1501  AAGATGGTGG  CTCGAGGAGT  ATAAGTTTGA  TGGTTTCAGA  TTTGACGGTG  TAACCTCAAT
1561  GATGTACACT  CATCATGGAT  TACAAGTAGC  ATTACGGGG  AACTACAGTG  AATACTTTGG
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1681  ACTTTATCCT  GAGGCCATAA  CCATCGGTGA  AGATGTCAGT  GGAATGCCTA  CATTTGCCCT
1741  TCCTGTTCAA  GATGGTGGGG  TTGGTTTGA  TTATCGCCTT  CATATGGCTG  TTCTTGACAA
1801  ATGGATTGAA  CTCCTCAAGC  AAAGTGATGA  ATCTTGGAAG  ATGGGTGATA  TTGTGCACAC
1861  ACTGACTAAC  AGAAGGTGGT  CAGAGAAGTG  TGTACTTAT  GCTGAAAGTC  ATGATCAAGC
1921  ACTAGTTGGT  GACAAAATA  TTGCATTCTG  GTTGATGGAC  AAGGATATGT  ATGATTTTAT
1981  GGCTCTGGAC  AGACCGGCAA  CACCTAGCAT  TGATCGTGGA  ATAGCATTCG  ATAAAATGAT
2041  TAGACTTATC  ACAATGGGGT  TAGGAGGAGA  AGGCTATCTT  AACTTTATGG  GAAATGAGTT
2101  CGGACATCCT  GAATGGATTG  ATTTTCCAAG  AGCTCCACAA  GTACTTCAA  ATGGTAAATT
2161  CATCCAGGG  AATAACAACA  GTTATGATAA  ATGCCGTCGA  AGATTTGACC  TGGGTGATGC
2221  GGAATATCTT  AGGTATCGTG  GCATGCTAGA  GTTTGACCGC  GCGATGCAGT  CTCTCGAGGA
2281  AAAATATGGG  TTCATGACAT  CAGACCACCA  GTACATATCT  CGAAAGCATG  AAGAGGATAA
2341  GATGATTATA  TTTGAGAAGG  GAGATCTGGT  ATTTGTGTTC  AACTTCCATT  GGAGTAACAG
2401  CTATTTTGAC  TACCGTGTG  GTTGTTTAAA  GCCAGGGAAA  TATAAGGTGG  TCTTGGAATC
2461  AGATGCTGGA  CTCTTTGGTG  GATTTGGCAG  GATCCATCAC  ACTGCAGAGC  ACTTCACTGC
2521  CGATTGTTCA  CATGACAACA  GGCCCTACTC  GTTCTCAGTT  TATTCCTCTA  GCAGAACCTG
2581  CGTTGTCTAT  GCTCCAGCGG  AATGAGAACA  CCAAGAGGCA  GCATGCAAGT  GTGTGCGGCT
2641  GCTAGTGCGA  AGGAGCAAGA  AAAACTAGTT  GCCAGCAATC  TGTGAACGGC  TTTCTTAGGT
2701  TCTGCTTCGA  TGAATGCCGG  ATAGACTAGA  CAGCTTGCTT  TTGTGCTTTG  CGCTCCCAAT
2761  TTGTAGTTTT  AGTTTGTGAG  GGAAAGAAAC  GTTTATTTGT  AATTATCTAT  GGCTGTGCGA
2821  CGGCGACGAA  ACCATGAACC  CCGTATATTT  GTTGGTACCG  TTCGAAGTGC  CAGTTATACA
2881  TAGTCTGCA  CTTCTGTACA  TCTTGTGATG  CTTGAATC

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Figure 3

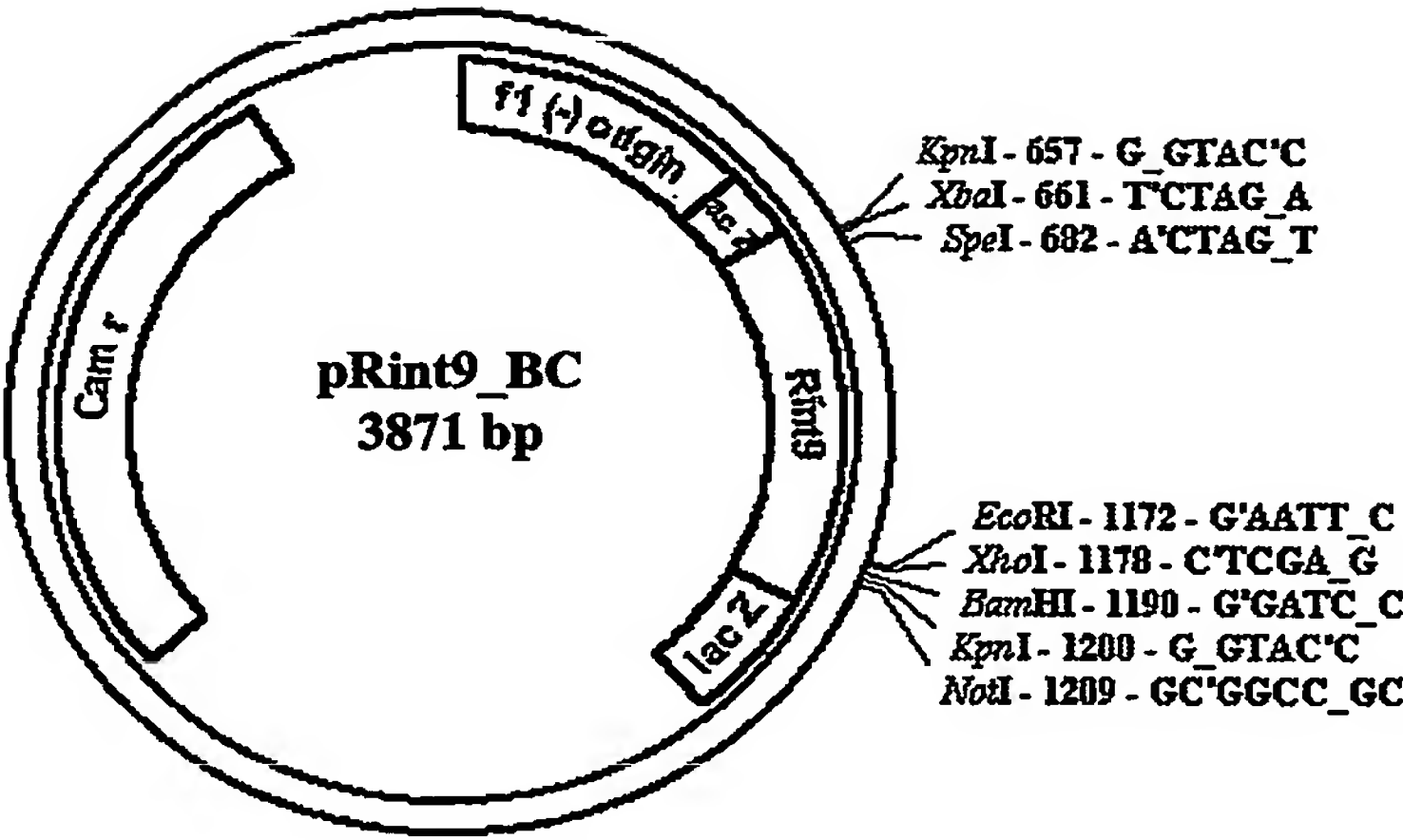


Figure 4



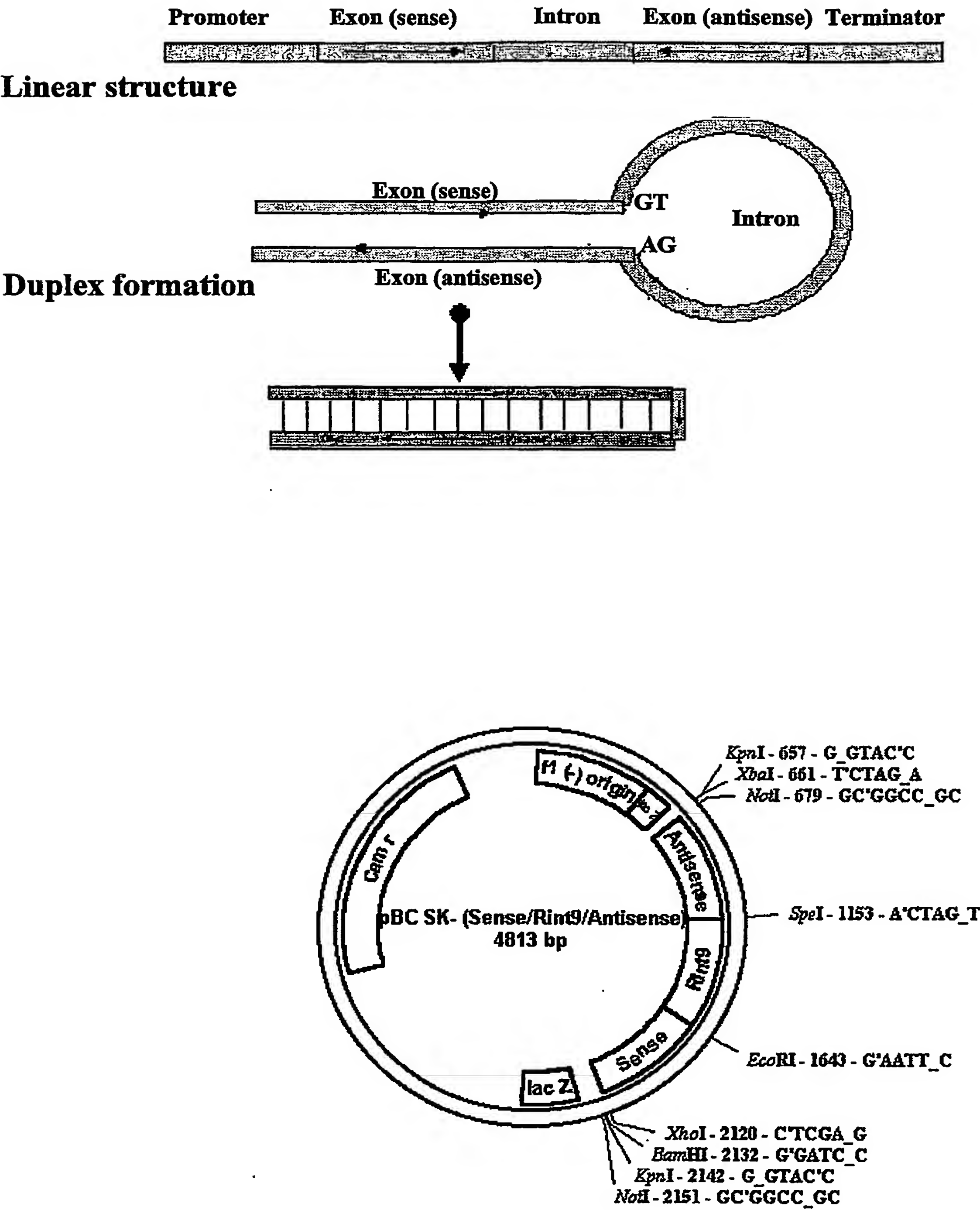
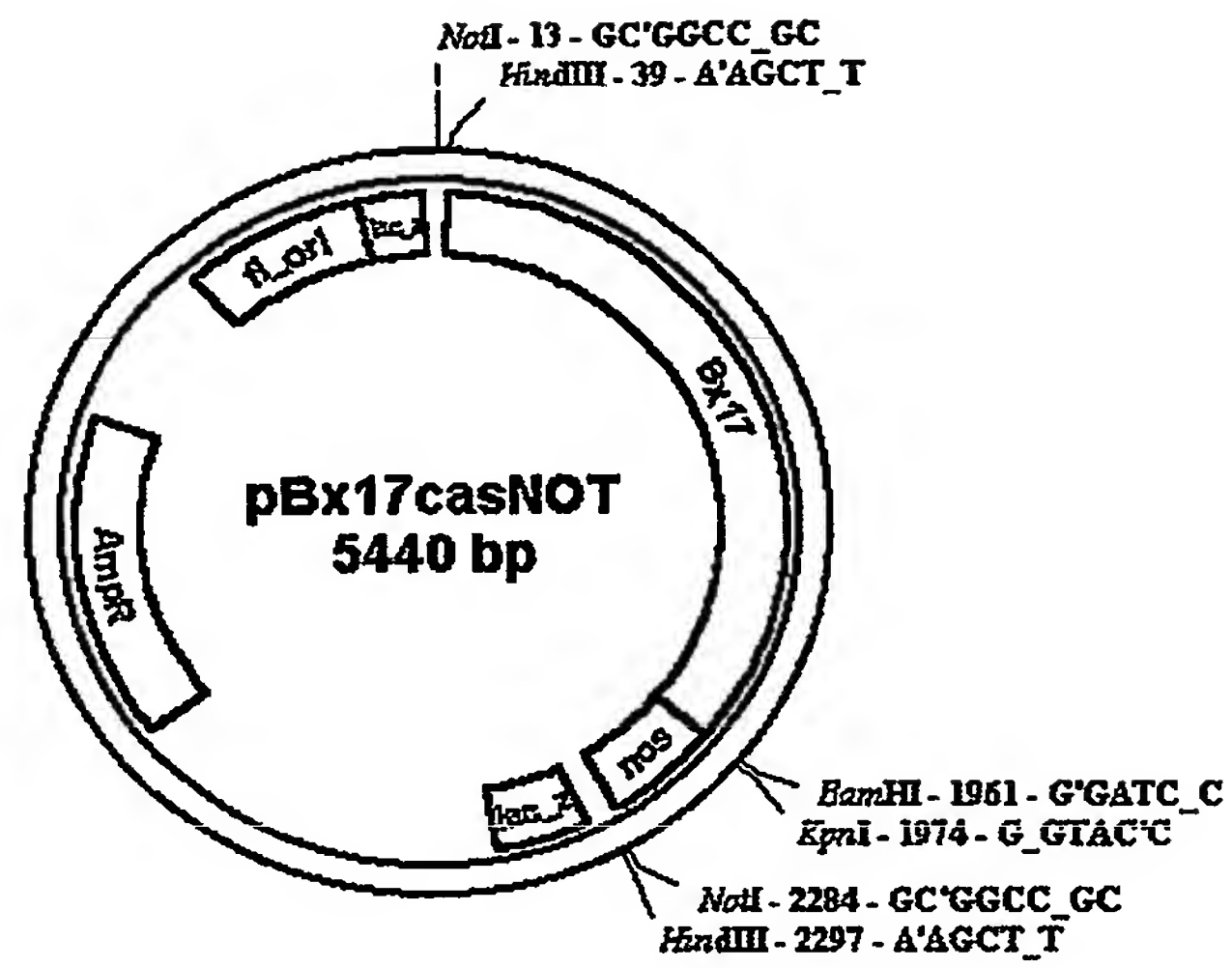


Figure 5

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**Figure 6**

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82 GCGCGGGGGTTGCCGGGGGATCCGATCCGGCTGCG.GTGCGGGCGAGATG 130  
||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
55 gcgcggcattttgcggcgga.gggatctgcgcgcgagtgcggtgcgggcag 103  
131 GCGGC.....GCCGGCGTCTGCGGTTCCCGGGA 158  
||||| ||||| ||||| ||||| ||||| ||||| |||||  
104 gcggcgggggagcacgcaccgggggatggcgctcggttcgcgggtgtcc.ggc 152  
159 GCGCGGCGGGGCTACGGGCGGGGGCCGTGCGGTTCCCCGTGCCAGCCGGG 208  
||| ||| || ||||| || ||||| || ||||| ||||| |||||  
153 gcgaggctcggggtcggtgcgggcggggggcg...cggcggcggcgggg 198  
209 GCCCGGAGCTGGCGTGCGGCGGCGGAGCTCCCGACGTCGCGGTCGCTGCT 258  
| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
199 gtggcccggcggcgcgatccggcgggg...tggacttgccgtcggtgct 244  
259 CTCCGGCCGGAGATTCCCCGGTGCCGTTCGCGTGGGGGGTTCCGGGGGGC 308  
|| | | ||| || ||||| || ||||| || ||||| |||||  
245 cttcaggagga.....aggactccttctcacgtggcggt..... 278  
309 GCGTGGCCGTGCGCGCGGCGGGCGCGTCAGGGGAGGTGATGATCCCCGAG 358  
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279 .....gtgagctgcgcgggtgctcctgggaagggtgctggtgcctggc 320  
359 GGCGAGAGCGACGGGATGCCGGTTTCAGCAGGTTCAGACG..... 398  
|| | ||||| ||||| ||||| ||||| ||||| ||||| |||||  
321 ggtgggagcgacgacttgctgtcctctgcggaaccagacgtggaaactca 370  
399 .....ATCTGCAGTTGCC.....AGCCT 416  
||| ||||| ||||| ||||| ||||| ||||| |||||  
371 agagcaacctgaagaatct.cagatacctgatgataataaagtaaacct 419  
417 T.....AGATGATGAATTAAGCACGGAGGT 441  
| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
420 tttgaggaggaggaagagattccagcagtggcagaagcaagcataaagg 469  
442 TGGAGCTGAAGTTGAGATTGAGTCATC.....TGGAG 473  
|| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
470 tgtggctgaagacaaacttgaatcttcagaagtgattcaagacattgagg 519  
474 CAAGTGACGTTGAAGGCGTGAAGAGAGTGGTTGAAGAATTAGCTGCTGAG 523  
|| || ||||| ||||| ||||| ||||| ||||| ||||| |||||  
520 aaaatgtgactgaggggtgtgatcaaagatgctgatgaaccaactgtggag 569  
524 CAGAAACCACGAGTTGTCCACCAACAGGAGATGGGCAAAAAATATTCCA 573  
| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
570 gataaaccacgagttatcccaccaccaggagatgggcagaagataacca 619  
574 GATGGACTCTATGCTTAATGGCTATAAGTACCATCTTGAATATCGATATA 623  
|| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
620 aattgaccaatgctggaaggatttcggaaccatcttgactaccgataca 669  
624 GCCTATATAGGAGACTGCGTTCAGACATTGATCAGTATGAAGGAGGACTG 673  
| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
670 gtgaatacaagagaatgcgtgcagctattgaccaacatgaagggtggcttg 719

Figure 7

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674 GAAACATTTTCTCGCGTTATGAGAAGTTTGGATTTAATCACAGTGCTGA 723  
|| ||||| ||||| || ||| ||||| | | ||| |||||  
720 gatgcattttctcgtggttacgaaaagcttggattcaccgcgagcgctga 769  
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||| | ||| ||||| ||||| || ||| ||||| ||||| ||||| |||||  
770 aggcattacctaccgagaatgggcacctggagcacagtctgcagcattag 819  
774 TAGGTGACTTCAACAATTGGAATCCAAATGCAGACCGCATGAGCAAAAAT 823  
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824 GAGTTTGGTGTTTGGGAGATTTTCTGCCTAACAATGCTGATGGCTCATC 873  
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874 TCCTATTCCACATGGCTCACGTGTAAAGGTGCGAATGGAACTCCATCTG 923  
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924 GTATAAAGGATTCTATTCCTGCCTGGATCAAGTACTCTGTGCAGGCCGCA 973  
| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
970 gcgtaaaggattcaattcctgcctggattaagtgtgctgtgcaggctcca 1019  
974 GGAGAAATCCCATAACAATGGAATATATATGATCCTCCTGAAGAGGAGAA 1023  
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1074 ACGAAACTCATGTTGGAATGAGTAGCACGGAGCCAAAGATCAACACGTAT 1123  
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1124 GCAAACCTTAGGGATGAGGTGCTTCCAAGAATCAAAAAGCTTGGATACAA 1173  
|| || ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
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1224 GGTACCATGTCACCAATTTCTTTGCACCAAGTAGTCGTTTCGGGACCCCA 1273  
|||| ||||| || ||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
1270 ggtatcatgttactaacttctttgcgccaagtagccgtttcggaacccca 1319  
1274 GAAGATTTAAAGTCATTGATTGATAAAGCTCATGAGCTTGGTTTAGTTGT 1323  
|||| | ||| || ||||| ||||| ||||| ||||| ||||| ||||| |||||  
1320 gaagacttgaaatctctgattgataaagctcacgagcttggtttgcttgt 1369  
1324 GCTCATGGATGTTGTTACAGCCATGCGTCAAATAATACCCTAGATGGGT 1373  
|| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
1370 acttatggatattgttcacagtcatgcatcaaacaataccctggatggtt 1419

Figure 7



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1374 TGAACGGTTTGTGATGGTACAGATACGCATTACTTTCATAGTGGTTCACGC 1423  
||||| ||||||| ||||||| ||||||| ||| ||| |||  
1420 tgaatggttttgatgggtactgatacacattacttccatgggtggaccacgg 1469  
1424 GGCCATCATTGGATGTGGGATTCTCGCCTTTTCAACTATGGGAATTGGGA 1473  
|| ||||| ||||||| ||||||| ||||||| ||||||| |||||||  
1470 ggtcatcactggatgtgggattctcgcctgttcaactatgggagttggga 1519  
1474 AGTTCTAAGATTTCTACTATCCAATGCAAGATGGTGGCTCGAGGAGTATA 1523  
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||||||| || || ||||||| || || ||||||| ||||||| |||||||  
1570 agtttgatgggtttcgatttgatgggggtgacctccatgatgtatactcat 1619  
1574 CATGGATTACAAGTAGCATTTACGGGGAACCTACAGTGAATACTTTGGATT 1623  
||||| ||||| || ||||||| || ||||| || ||||| |||||||  
1620 catgggtttacaggtggcatttactggcaactatggcgaatattttggatt 1669  
1624 TGCCACTGATGCTGATGCAGTAGTTTACTTGATGCTGGTAAATGATTAA 1673  
||| ||||||| ||||||| ||||||| ||||||| || ||| |||  
1670 tgctactgatgttgatgcagtagtttacttgatgctggtgaacgatctaa 1719  
1674 TTCATGGACTTTATCCTGAGGCCATAACCATCGGTGAAGATGTCAGTGGA 1723  
||||||| ||||||| ||||| || ||||| ||||||| |||||  
1720 ttcatgggctttatcctgaggctgtagccattgggtgaagatgtcagcggg 1769  
1724 ATGCCTACATTTGCCCTTCCTGTTCAAGATGGTGGGGTTGGTTTGTATTA 1773  
||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||  
1770 atgcccacattttgtattcctgttcaagatgggtggtggttttgacta 1819  
1774 TCGCCTTCATATGGCTGTTCTGACAAATGGATTGAACTCCTCAAGCAAA 1823  
||| | ||||||| || || ||||||| ||||||| ||||||| |||||||  
1820 tcgtttgcatatggctgtaccggacaaatggatcgaactcctcaagcaaa 1869  
1824 GTGATGAATCTTGGAAGATGGGTGATATTGTGCACACACTGACTAACAGA 1873  
||||| ||||| ||||||| ||||||| ||||||| || ||| |||  
1870 gtgacgaatattggaaaatgggtgatatcgtgcacaccctaacgaataga 1919  
1874 AGGTGGTCAGAGAAGTGTGTTACTTATGCTGAAAGTCATGATCAAGCACT 1923  
||||||| ||||||| ||||||| ||||||| ||||||| |||||||  
1920 aggtggtcagagaagtgtgttacttatgcagaaagtcatgaccaagcact 1969  
1924 AGTTGGTGACAAAACCTATTGCATTCTGGTTGATGGACAAGGATATGTATG 1973  
||||||| ||||||| ||||||| ||||||| ||||||| |||||||  
1970 agttggtgacaagactattgcattctggttgatggataaggatatgtatg 2019  
1974 ATTTTATGGCTCTGGACAGACCGGCAACACCTAGCATTGATCGTGGAATA 2023  
||||||| ||||||| ||||||| ||||||| ||||||| |||||  
2020 attttatggctctagacagacctcaacacctcgcatatgatcgtgggata 2069  
2024 GCATTGCATAAAATGATTAGACTTATCACAATGGGGTTAGGAGGAGAAGG 2073  
||||| ||||||| ||||||| || ||| ||||| ||||||| |||||||  
2070 gcattacataaaatgattaggcttgtcaccatgggcttaggaggcgaagg 2119

Figure 7

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```

2074 CTATCTTAACTTTATGGGAAATGAGTTCGGACATCCTGAATGGATTGATT 2123
      ||||| ||| ||||| ||||| ||| ||||| ||||| |||||
2120 ctatcttaatttcatgggaaatgagtttgggcatcctgaatggatagatt 2169

2124 TTCCAAGAGCTCCACAAGTACTTCCAAATGGTAAATTCATCCCAGGGAAT 2173
      | ||||| ||| ||| ||||| ||||| ||| ||||| |||
2170 tccaagaggcccgcaaagtcttccaaatggctcggtcctcccaggaaac 2219

2174 AACACAGTTATGATAAATGCCGTCGAAGATTTGACCTGGGTGATGCGGA 2223
      ||| ||||| ||||| ||||| ||||| ||| ||||| |||
2220 aactacagttttgataaatgccgtcgtagatttgaccttgagatgcaga 2269

2224 CTATCTTAGGTATCGTGGCATGCTAGAGTTTGACCGCGCGATGCAGTCTC 2273
      ||||| |||| ||| ||| ||||| ||||| ||| ||||| |||
2270 ttatcttagatatcatggtatgcaagagtttgatcaggccatgcagcatc 2319

2274 TCGAGGAAAAATATGGGTTCATGACATCAGACCACCAGTACATATCTCGA 2323
      | ||||| ||||| ||||| ||||| ||| ||||| ||||| |||
2320 ttgaggaaaaatatggattcatgacatctgagcaccagtatatatcgcg 2369

2324 AAGCATGAAGAGGATAAGATGATTATATTGAGAAGGGAGATCTGGTATT 2373
      || || || ||||| |||| ||| ||| ||||| ||||| |||||
2370 aaacacgaggaggataaggtgatcatcttcgagagaggagatttggtatt 2419

2374 TGTGTTCAACTTCCATTGGAGTAACAGCTATTTTGACTACCGTGTTGGTT 2423
      ||||| ||||| ||||| ||||| ||||| ||| ||| |||||
2420 cgtgttcaacttccactggagtaatatgctatcttgactatcgcgtcggtt 2469

2424 GTTTAAAGCCAGGGAAATATAAGGTGGTCTTGGAATCAGATGCTGGACTC 2473
      ||||| |||| ||| ||| ||| ||| ||||| ||||| ||| |||
2470 gtttaaagcctggaaagtacaagattgtgttggactcagacgatggcctc 2519

2474 TTTGGTGGATTTGGCAGGATCCATCACACTGCAGAGCACTTCACTGCCGA 2523
      ||||| |||| ||| ||| ||| ||| ||||| ||||| |||
2520 tttggtggattcagtcggcttgatcatgatgctgagtacttcactgctga 2569

2524 TTGTTCACATGACAACAGGCCCTACTCGTTCTCAGTTTATTCTCCTAGCA 2573
      || | ||||| |||| ||| ||| ||||| ||| ||| ||| |||
2570 ctggccgcatgacaacagaccatgttcattctcggtgtacacccaagca 2619

2574 GAACCTGCGTTGTCTATGCTC 2594
      ||||| ||| || ||||| |
2620 gaaccgccgtcgtgtatgcac 2640

```

Figure 7

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## riceSBEIIaIR.seq

```
1      CTCGAGTCTA  GATCGCGTC  G GTTGTTTA  AA GCCTGGA  AAG TACAAG  ATTGT
56     GTTGGACTC  AGACGATGGC  CTCTTTGGT  G GATTCAGT  CG GCTTGAT  CATGA
111    TGCTGAGT  A CTTCACTGC  TGACTGGCCG  CATGACAAC  A GACCATGT  TCATT
166    CTCGGTG  TA CACCCCAA  G CAGAACCGC  CGTCGTGTAT  GCACTTACA  GAGGA
221    CTAATG  ATC AGCTCTG  AT CATTGGGG  G AACAACTCA  AGGGAGTTGG  TGGTA
276    ATGAC  GCCG GAATAC  AAC TCAAGTG  AA AGGTGAAA  A GAAAGGCTGC  CCTGA
331    CGAT  GTGAT TTGAG  GGGC TTGTGT  TTC ATCGCCA  AT GCCAGGAAGA  TGAGG
386    TAG  AAAAGC CTAC  TGATG  AGCTC  CTGT TTTCGA  GTG ACTCGTGAAG  GAAAT
441    AG  ACCAGGG TGA  ACGGCT TTTT  TCAGA GCTAT  ACCA AACCCATCCT  ATGTT
496    G  CGCATTCG CT  GTAGTTT TGT  ACATAA CGAT  ATCGG TTGGCATTG  TATGT
551    TTATGAATA  A TCTGTTCG AC  AGAAATG TTT  TTCTCC TTGTAAC TAG  TGAA
606    TTC
```

## riceSBEIIbIR.seq

```
1      CTCGAGTCTA  GNNNNNNNNN  N NNNNNNNNN  NN NNNNNNNN  NNN NNNNNNN  NNNNNN
56     NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  N NNNNNNNNN  NN NNNNNNNN  NNNNNN
111    NNNNNNNNN  N NNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  N NNNNNNNNN  NNNNNN
166    NNNNNNNN  NN NNNNNNNNN  N NNNNNNNNN  NNNNNNNNNNG  CTCCAGCGG  AATGA
221    GAACAC  CAA GAGGCAG  CA TGCAAGTG  T GTGCGGCTG  CTAGTGCGAA  GGAGC
276    AAGAA  AAAC TAGTTG  CCA GCAATCT  GT GAACGGCT  T TCCTAGGTTT  TGCTT
331    CGAT  GAATG CCGGA  TAGA CTAGAC  ANN NNNNNNNN  NN NNNNNNNNNN  NNNNNN
386    NNT  TGTAGT TTTA  GTTTG TGAGG  GAAA GAAACG  TTT ATTTGTAATT  ATCTG
441    TG  GCTGTCG AAC  GGCGAC GAAA  CCATG AACCC  CGTA TATTTGTTGG  TACCG
496    T  TCGAACTG CC  AGTTATA CAT  AGTTCT GCAC  TTCTG TACATCTTGT  GATGC
551    TACTAGTGA  A TTC
```

## riceSBEIIR.seq

```
1      CTCGAGTCTN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
56     NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
111    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
166    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
221    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
276    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
331    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
386    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
441    NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNNNNNN  NNNNNN
496    NNNNNNNNNN  NNNNNNNNAGC  ATCAGATTTT  TTGATCAGGA  GCAACTGTTG  GTGCC
551    CTTGTAAACT  AGTGAATTC
```

**Figure 8**